

## WEST Search History

DATE: Thursday, June 05, 2003

**Set Name Query**  
side by side

**Hit Count Set Name**  
result set

*DB=USPT,PGPB; PLUR=YES; OP=ADJ*

L6	L5 and dna methyltransferase	5	L6
L5	L4 and dna methylase	26	L5
L4	L3 and transgenic	376	L4
L3	L2 and (gene or cdna or coding sequence)	540	L3
L2	methyltransferase and (corn or maize or zea mays)	592	L2
L1	zmet2a	0	L1

END OF SEARCH HISTORY

Connecting via Winsock to STN

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LOGINID:sssptal649axm

PASSWORD:

TERMINAL (ENTER 1, 2, 3, OR ?):2

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NEWS	1		Web Page URLs for STN Seminar Schedule - N. America
NEWS	2	Apr 08	"Ask CAS" for self-help around the clock
NEWS	3	Apr 09	BEILSTEIN: Reload and Implementation of a New Subject Area
NEWS	4	Apr 09	ZDB will be removed from STN
NEWS	5	Apr 19	US Patent Applications available in IFICDB, IFIPAT, and IFIUDB
NEWS	6	Apr 22	Records from IP.com available in CAPLUS, HCAPLUS, and ZCAPLUS
NEWS	7	Apr 22	BIOSIS Gene Names now available in TOXCENTER
NEWS	8	Apr 22	Federal Research in Progress (FEDRIP) now available
NEWS	9	Jun 03	New e-mail delivery for search results now available
NEWS	10	Jun 10	MEDLINE Reload
NEWS	11	Jun 10	PCTFULL has been reloaded
NEWS	12	Jul 02	FOREGE no longer contains STANDARDSfile segment
NEWS	13	Jul 22	USAN to be reloaded July 28, 2002; saved answer sets no longer valid
NEWS	14	Jul 29	Enhanced polymer searching in REGISTRY
NEWS	15	Jul 30	NETFIRST to be removed from STN
NEWS	16	Aug 08	CANCERLIT reload
NEWS	17	Aug 08	PHARMAMarketLetter(PHARMAML) - new on STN
NEWS	18	Aug 08	NTIS has been reloaded and enhanced
NEWS	19	Aug 19	Aquatic Toxicity Information Retrieval (AQUIRE) now available on STN
NEWS	20	Aug 19	IFIPAT, IFICDB, and IFIUDB have been reloaded
NEWS	21	Aug 19	The MEDLINE file segment of TOXCENTER has been reloaded
NEWS	22	Aug 26	Sequence searching in REGISTRY enhanced
NEWS	23	Sep 03	JAPIO has been reloaded and enhanced
NEWS EXPRESS			February 1 CURRENT WINDOWS VERSION IS V6.0d, CURRENT MACINTOSH VERSION IS V6.0a(ENG) AND V6.0Ja(JP), AND CURRENT DISCOVER FILE IS DATED 05 FEBRUARY 2002
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NEWS LOGIN			Welcome Banner and News Items
NEWS PHONE			Direct Dial and Telecommunication Network Access to STN
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FILE 'HOME' ENTERED AT 13:01:47 ON 14 SEP 2002

=> file agricola caplus biosis  
COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
0.21	0.21

FULL ESTIMATED COST

FILE 'AGRICOLA' ENTERED AT 13:01:58 ON 14 SEP 2002

FILE 'CAPLUS' ENTERED AT 13:01:58 ON 14 SEP 2002  
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FILE 'BIOSIS' ENTERED AT 13:01:58 ON 14 SEP 2002  
COPYRIGHT (C) 2002 BIOLOGICAL ABSTRACTS INC.(R)

=> s zmet2a

L1 2 ZMET2A

=> dup rem l1

PROCESSING COMPLETED FOR L1

L2 2 DUP REM L1 (0 DUPLICATES REMOVED)

=> d 1-2 ti

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI Analysis of **zmet2a**: A maize methyltransferase essential for  
CpNpG methylation

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

TI Class II DNA methyltransferases of maize

=> d 1-2 so

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

SO (2000) 106 pp. Avail.: UMI, Order No. DA9960383  
From: Diss. Abstr. Int., B 2000, 61(1), 68

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

SO PCT Int. Appl., 103 pp.  
CODEN: PIXXD2

=> d ab

L2 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2002 ACS

AB Unavailable

=> d 2 pi

L2 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2002 ACS

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2000053732	A2	20000914	WO 2000-US6456	20000310
WO 2000053732	A3	20001221		

W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,  
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM,  
AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE,  
 DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF,  
 CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
 EP 1159407 A2 20011205 EP 2000-917875 20000310  
 R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,  
 IE, SI, LT, LV, FI, RO

=> s ((papa, c?) or (papa c?))/au  
 L3 163 ((PAPA, C?) OR (PAPA C?))/AU

=> s l3 and methyltransferase  
 L4 5 L3 AND METHYLTRANSFERASE

=> dup rem l4  
 PROCESSING COMPLETED FOR L4  
 L5 3 DUP REM L4 (2 DUPLICATES REMOVED)

=> d 1-3 ti

L5 ANSWER 1 OF 3 AGRICOLA DUPLICATE 1  
 TI Maize chromomethylase Zea methyltransferase2 is required for CpNpG methylation.

L5 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS  
 TI Analysis of zmet2a: A maize **methyltransferase** essential for CpNpG methylation

L5 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS  
 TI Class II DNA methyltransferases of maize

=> d so

L5 ANSWER 1 OF 3 AGRICOLA DUPLICATE 1  
 SO The Plant cell, Aug 2001. Vol. 13, No. 8. p. 1919-1928  
 Publisher: [Rockville, MD : American Society of Plant Physiologists,  
 c1989-  
 CODEN: PLCEEW; ISSN: 1040-4651

=> d ab

L5 ANSWER 1 OF 3 AGRICOLA DUPLICATE 1  
 AB A cytosine DNA **methyltransferase** containing a chromodomain, Zea methyltransferase2 (Zmet2), was cloned from maize. The sequence of ZMET2 is similar to that of the Arabidopsis chromomethylases CMT1 and CMT3, with C-terminal motifs characteristic of eukaryotic and prokaryotic DNA methyltransferases. We used a reverse genetics approach to determine the function of the Zmet2 gene. Plants homozygous for a Mutator transposable element insertion into motif IX had a 13% reduction in methylated cytosines. DNA gel blot analysis of these plants with methylation-sensitive restriction enzymes and bisulfite sequencing of a 180-bp knob sequence showed reduced methylation only at CpNpG sites. No reductions in methylation were observed at CpG or asymmetric sites in heterozygous or homozygous mutant plants. Our research shows that chromomethylase Zmet2 is required for in vivo methylation of CpNpG sequences.

=> d au

L5 ANSWER 1 OF 3 AGRICOLA DUPLICATE 1  
 AU **Papa, C.M.**; Springer, N.M.; Muszynski, M.G.; Meeley, R.; Kaeppler, S.M.

```
=> s ((kaeppler s?) or (kaeppler, s?))/au
L6      89 ((KAEPPLE S?) OR (KAEPPLE, S?))/AU
```

```
=> l6 and methyltransferase
L6 IS NOT A RECOGNIZED COMMAND
The previous command name entered was not recognized by the system.
For a list of commands available to you in the current file, enter
"HELP COMMANDS" at an arrow prompt (=>).
```

```
=> s l6 and methyltransferase
L7      8 L6 AND METHYLTRANSFERASE
```

```
=> dup rem l7
PROCESSING COMPLETED FOR L7
L8      4 DUP REM L7 (4 DUPLICATES REMOVED)
```

```
=> d 1-4 ti
```

```
L8      ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2002 ACS
TI      Nucleic acid and amino acid sequences encoding a de novo DNA
        methyltransferase from corn and the use of the
        methyltransferase for altering a target gene methylation in a
        plant
```

```
L8      ANSWER 2 OF 4  AGRICOLA                                DUPLICATE 1
TI      Maize chromomethylase Zea methyltransferase2 is required for CpNpG
        methylation.
```

```
L8      ANSWER 3 OF 4  CAPLUS  COPYRIGHT 2002 ACS
TI      Class II DNA methyltransferases of maize
```

```
L8      ANSWER 4 OF 4  AGRICOLA                                DUPLICATE 2
TI      Conserved plant genes with similarity to mammalian de novo DNA
        methyltransferases.
```

```
=> d pi
```

```
L8      ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2002 ACS
PATENT NO.      KIND      DATE      APPLICATION NO.      DATE
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PI      WO 2001053470      A2      20010726      WO 2001-US2229      20010123
        WO 2001053470      A3      20011220
        W:  AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,
            CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,
            IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,
            MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,
            SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM
        RW:  GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
            DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
            BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG
        US 2002049996      A1      20020425      US 2001-767536      20010123
```

```
=> d 4 ab
```

```
L8      ANSWER 4 OF 4  AGRICOLA                                DUPLICATE 2
AB      DNA methylation plays a critical role in controlling states of gene
        activity in most eukaryotic organisms, and it is essential for proper
        growth and development. Patterns of methylation are established by de novo
        methyltransferases and maintained by maintenance methyltransferase
```

activities. The Dnmt3 family of de novo DNA methyltransferases has recently been characterized in animals. Here we describe DNA **methyltransferase** genes from both Arabidopsis and maize that show a high level of sequence similarity to Dnmt3, suggesting that they encode plant de novo methyltransferases. Relative to all known eukaryotic methyltransferases, these plant proteins contain a novel arrangement of the motifs required for DNA **methyltransferase** catalytic activity. The N termini of these methyltransferases contain a series of ubiquitin-associated (UBA) domains. UBA domains are found in several ubiquitin pathway proteins and in DNA repair enzymes such as Rad23, and they may be involved in ubiquitin binding. The presence of UBA domains provides a possible link between DNA methylation and ubiquitin/proteasome pathways.

=> d 4 so

L8 ANSWER 4 OF 4 AGRICOLA DUPLICATE 2  
 SO Proceedings of the National Academy of Sciences of the United States of America, Apr 25, 2000. Vol. 97, No. 9. p. 4979-4984  
 Publisher: Washington, D.C. : National Academy of Sciences,  
 CODEN: PNASA6; ISSN: 0027-8424

=> s zmet2?

L9 5 ZMET2?

=> dup rem l9

PROCESSING COMPLETED FOR L9

L10 3 DUP REM L9 (2 DUPLICATES REMOVED)

=> d 1-3 ti

L10 ANSWER 1 OF 3 AGRICOLA DUPLICATE 1  
 TI Maize chromomethylase Zea methyltransferase2 is required for CpNpG methylation.

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS  
 TI Analysis of **zmet2a**: A maize methyltransferase essential for CpNpG methylation

L10 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS  
 TI Class II DNA methyltransferases of maize

=> d 2 so

L10 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS  
 SO (2000) 106 pp. Avail.: UMI, Order No. DA9960383  
 From: Diss. Abstr. Int., B 2000, 61(1), 68

=> s (corn or maize or zea) and methyltransferase

L11 188 (CORN OR MAIZE OR ZEA) AND METHYLTRANSFERASE

=> s l11 and (gene or cDNA or coding region)

L12 120 L11 AND (GENE OR CDNA OR CODING REGION)

=> s l12 and dna methyltransferase

L13 17 L12 AND DNA METHYLTRANSFERASE

=> dup rem l13

PROCESSING COMPLETED FOR L13

L14 12 DUP REM L13 (5 DUPLICATES REMOVED)

=> d 1-12 ti

- L14 ANSWER 1 OF 12 CAPLUS COPYRIGHT 2002 ACS  
TI Zinc finger domain recognition code for use in designing DNA binding proteins
- L14 ANSWER 2 OF 12 CAPLUS COPYRIGHT 2002 ACS  
TI Reverse genetic strategy for identifying functional mutations, TILLING (targeting induced local lesions in genomics) that combines chemical mutagenesis with a sensitive mutation detection
- L14 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2002 ACS  
TI Nucleic acid and amino acid sequences encoding a de novo **DNA methyltransferase** from **corn** and the use of the **methyltransferase** for altering a target **gene** methylation in a plant
- L14 ANSWER 4 OF 12 CAPLUS COPYRIGHT 2002 ACS  
TI Usage of zinc finger protein to regulate **gene** expression and metabolic pathways in plants and creation of five zinc finger proteins
- L14 ANSWER 5 OF 12 AGRICOLA DUPLICATE 1  
TI **Maize** chromomethylase **Zea methyltransferase2** is required for CpNpG methylation.
- L14 ANSWER 6 OF 12 CAPLUS COPYRIGHT 2002 ACS  
TI Selection and orientation of adjacent genes influences DAM-mediated male sterility in transformed **maize**
- L14 ANSWER 7 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
TI Hypomethylation of the c-Myc **gene** by the peroxisome proliferator, Wy-14,643.
- L14 ANSWER 8 OF 12 CAPLUS COPYRIGHT 2002 ACS  
TI Class II DNA methyltransferases of **maize**
- L14 ANSWER 9 OF 12 AGRICOLA DUPLICATE 2  
TI Conserved plant genes with similarity to mammalian de novo DNA methyltransferases.
- L14 ANSWER 10 OF 12 AGRICOLA DUPLICATE 3  
TI Expression of ZmMET1, a **gene** encoding a **DNA methyltransferase** from **maize**, is associated not only with DNA replication in actively proliferating cells, but also with altered DNA methylation status in cold-stressed quiescent cells.
- L14 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS  
TI Cloning and characterization of the 5-methylcytosine **methyltransferase gene** in **maize (zea mays)** plants and tissue cultures
- L14 ANSWER 12 OF 12 BIOSIS COPYRIGHT 2002 BIOLOGICAL ABSTRACTS INC.  
TI CHANGES IN **DNA METHYLTRANSFERASE** INDUCED BY TREATMENT WITH N-2 ACETYLAMINOFLUORENE.

=> d 3 so

- L14 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2002 ACS  
SO PCT Int. Appl., 50 pp.  
CODEN: PIXXD2

=> d 3 pi

L14 ANSWER 3 OF 12 CAPLUS COPYRIGHT 2002 ACS  
PATENT NO. KIND DATE APPLICATION NO. DATE  
-----  
PI WO 2001053470 A2 20010726 WO 2001-US2229 20010123  
WO 2001053470 A3 20011220  
W: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU,  
CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL,  
IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA,  
MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI,  
SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW, AM, AZ,  
BY, KG, KZ, MD, RU, TJ, TM  
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,  
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,  
BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG  
US 2002049996 A1 20020425 US 2001-767536 20010123

=> d 5 so

L14 ANSWER 5 OF 12 AGRICOLA DUPLICATE 1  
SO The Plant cell, Aug 2001. Vol. 13, No. 8. p. 1919-1928  
Publisher: [Rockville, MD : American Society of Plant Physiologists,  
c1989-  
CODEN: PLCEEW; ISSN: 1040-4651

=> d 9 ab

L14 ANSWER 9 OF 12 AGRICOLA DUPLICATE 2  
AB DNA methylation plays a critical role in controlling states of  
**gene** activity in most eukaryotic organisms, and it is essential  
for proper growth and development. Patterns of methylation are established  
by de novo methyltransferases and maintained by maintenance  
**methyltransferase** activities. The Dnmt3 family of de novo DNA  
methyltransferases has recently been characterized in animals. Here we  
describe **DNA methyltransferase** genes from both  
Arabidopsis and **maize** that show a high level of sequence  
similarity to Dnmt3, suggesting that they encode plant de novo  
methyltransferases. Relative to all known eukaryotic methyltransferases,  
these plant proteins contain a novel arrangement of the motifs required  
for **DNA methyltransferase** catalytic activity. The N  
termini of these methyltransferases contain a series of  
ubiquitin-associated (UBA) domains. UBA domains are found in several  
ubiquitin pathway proteins and in DNA repair enzymes such as Rad23, and  
they may be involved in ubiquitin binding. The presence of UBA domains  
provides a possible link between DNA methylation and ubiquitin/proteasome  
pathways.

=> d 9 so

L14 ANSWER 9 OF 12 AGRICOLA DUPLICATE 2  
SO Proceedings of the National Academy of Sciences of the United States of  
America, Apr 25, 2000. Vol. 97, No. 9. p. 4979-4984  
Publisher: Washington, D.C. : National Academy of Sciences,  
CODEN: PNASA6; ISSN: 0027-8424

=> d 10 ab

L14 ANSWER 10 OF 12 AGRICOLA DUPLICATE 3



=> d 10 so

L14 ANSWER 10 OF 12 AGRICOLA DUPLICATE 3  
SO Nucleic acids research, Sept 1, 2000. Vol. 28, No. 17. p. 3250-3259  
Publisher: Oxford : Oxford University Press.  
CODEN: NARHAD; ISSN: 0305-1048

=> d 11 ab

L14 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS  
AB Unavailable

=> d 11 so

L14 ANSWER 11 OF 12 CAPLUS COPYRIGHT 2002 ACS  
SO (1998) 137 pp. Avail.: UMI, Order No. DA9907518  
From: Diss. Abstr. Int., B 1999, 59(9), 4638

=> s cmt1

L15 173 CMT1

=> s l15 and methyltransferase

L16 7 L15 AND METHYLTRANSFERASE

=> dup rem l16

PROCESSING COMPLETED FOR L16

L17 3 DUP REM L16 (4 DUPLICATES REMOVED)

=> d 1-3 ti

L17 ANSWER 1 OF 3 AGRICOLA DUPLICATE 1  
TI Maize chromomethylase Zea methyltransferase2 is required for CpNpG  
methylation.

L17 ANSWER 2 OF 3 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 2  
TI The Candida albicans gene for mRNA 5'-cap **methyltransferase**:  
identification of additional residues essential for catalysis

L17 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3  
TI A DNA **methyltransferase** homolog with a chromodomain exists in  
multiple polymorphic forms in Arabidopsis

=> d 3 ab

L17 ANSWER 3 OF 3 CAPLUS COPYRIGHT 2002 ACS DUPLICATE 3  
AB Chromodomains are thought to mediate protein-protein interactions between  
chromatin components. The authors have detected a chromodomain embedded  
within the catalytic region of a predicted Arabidopsis DNA  
**methyltransferase** that is diverged from other eukaryotic enzymes.  
The 791 residue "chromomethylase" (**CMT1**) is encoded by a floral  
transcript that is spliced from 20 exons and is present at only  
.apprx.1/10-7 of total mRNA. Genomic sequencing reveals an ancient  
haplotype split at **CMT1** between Col-0 + Metz and the other  
ecotypes examd. In the Col-0 + Metz haplotype, alternative mRNA  
processing at intron 13 truncates the coding region. In Ler, RLD, and  
No-0, similar truncation is caused by insertion of an intact  
retrotransposon, Evelknievel, which is present as a single copy in Ler and  
RLD and is currently methylated and inactive. Evelknievel is found at  
this site on a single branch that connects the Ler, RLD, and No-0 ecotypes

but is absent from the genomes of all other ecotypes examd. A stop codon within exon 6 of the Metz ecotype confirms that **CMT1** is nonessential. Nevertheless, comparison to **CMT1** of *Cardaminopsis arenosa*, an outcrossing relative, indicates conservation for DNA **methyltransferase** function. The authors discuss how allelic diversity of **CMT1** may reflect loosened selective constraints in a self-fertilizing species such as *Arabidopsis thaliana*.